

REMARKS

Claims 1-92 were pending in the application. Claims 24-27, 36-39, 51-59, 63-68 and 80-92 are withdrawn. Claims 1-23, 28-35, 40-50, 60-62 and 69-79 were rejected. Claims 77 and 79 are cancelled without prejudice. Claims 93-94 are new dependent claims.

SPECIFICATION

The specification stands objected to for certain informalities. Applicant has amended paragraph [0001] of the specification to include the patent numbers of the related applications stated in the paragraph. Therefore, reconsideration and withdrawal of this objection are respectfully requested.

CLAIM OBJECTIONS

Claims 69 and 79 are objected to because of certain informalities. Accordingly, claim 69 has been amended. Claim 79 is cancelled.

REJECTION UNDER 35 U.S.C. § 102

Claims 1-2, 4-7, 10-12, 15, 19-21, 28-30, 60-62, 69 and 72-79 stand rejected under 35 U.S.C. § 102(b) as being anticipated by King (U.S. Pat. No. 6,216,723). This rejection is respectfully traversed.

Claim 1 is amended to recite a saddle tee and tap combination, "...the tap configured for insertion into the tee and comprising a stem having a passage therethrough, the stem terminating in a blunt point having a radius of curvature whereby the blunt point, in penetrating the line, forms a coupon that remains hingedly attached to the irrigation line wall." King '723 discloses a self-tapping tee for heavy walled plastic pipe. The stem 52 is not described as terminating in a blunt point that forms a coupon. King '723 does not anticipate the recitations of amended claim 1. Accordingly, claim 1 and claims 2-14 dependent on claim 1 should be allowed.

Claim 20 is amended to recite a saddle tee and tap combination, "...the tee comprising ...a clamp on an end of the base for engaging the irrigation line generally in alignment with the passageway; the tap comprising ...a tip ...including a thread thereon to engage the wall of the irrigation line and an opening to allow fluid communication with the exterior of the irrigation line ...". King '723 does not teach or suggest the recitations of claim 20. Claim 20 and claim 21 dependent thereon should be allowed.

Claim 28 is amended to recite "...a tap in the passageway of the saddle tee, the tap having a cutting member penetrating the irrigation line in the clamp in the direction of elongation, and making a fluid connection with the irrigation line to make a fluid connection with the wall of the irrigation line engaged in the clamp, in the direction of the elongation of the cross section; the cutting member having at least one beveled edge that causes a coupon to be formed from and connected to the line wall." King '723

does not teach or suggest the recitations of claim 28. Claim 28 and claim 29 dependent thereon should be allowed.

With reference to independent claim 60, the claim is amended to recite that "...the blunt point forms a coupon that remains hingedly attached to the irrigation line wall." It is asserted in the Office Action that King '723 discloses a stem 52 terminating in a blunt point having a radius of curvature greater than about 0.05 inches, whereby the blunt point forms a coupon from the irrigation line wall. King '723 discloses a self-tapping tee for heavy walled plastic pipe. The stem 52 is not described as terminating in a blunt point that forms a coupon. King '723 does not anticipate the recitations of amended claim 60. Accordingly, claim 60 should be allowed.

With reference to independent claim 61, the stem 52 of King '723 is shown in detail in FIG. 5a-5c. Point 62 of stem 52 or shaft 70 (when stem 52 is truncated) contacts a sidewall of line 22 and pokes through, the sidewall of the pipe or tubing around the hole stretched about the point, forming a seal 82, best seen in detail FIG. 5a. The stem 52 has no shoulder. FIG. 5b shows a seal with the addition of an o-ring, and FIG. 5c shows a seal with the addition of glue (col. 4, line 63-col. 14). King '723 thus does not disclose a "stem having a shoulder to match the contour of the wall near the puncture" as recited in claim 61. Accordingly, Applicant submits that claim 61 should be allowed.

With reference to claim 62, the claim is amended to recite "...the stem terminating in a cutting member having one or more cutting edges arranged to define an area around which the cutting member is configured to cut." King '723 does not anticipate the recitations of amended claim 62. Accordingly, claim 62 as amended should be allowed.

With reference to claim 69, King '723 does not disclose "...spacers spacing the jaws sufficiently from the second end of the base to permit debris to pass through the passage when an irrigation line is engaged in the clamp" as recited in the claim. Accordingly, claim 69 and claims 70-71 dependent on claim 69 should be allowed.

With reference to claim 72, the claim is amended to recite "...the tap having a tip with an end adapted to be inserted into the passageway so that the end scores around an area of and penetrates the wall of the irrigation line engaged in the clamp, in the direction of the elongation of the cross section." King '723 does not disclose the recitations of amended claim 72. Claim 72 and claims 73-74 dependent on claim 72 should be allowed.

Referring to claim 75, the claim is amended to recite "...a tap in the passageway of the saddle tee, the tap having a base and a tip extending from the tap base and penetrating the irrigation line in the clamp and making a fluid connection with the irrigation line, the tip having a shoulder adjacent a junction of the tip with the tap base, the shoulder having a longitudinal contour configured to stretch an opening in and form a seal with the irrigation line." King '723 does not disclose the recitations of amended claim 75.

Additionally, claim 76 is amended to recite the fluid connection according to claim 75 wherein the contour is curved. Claim 75 and claim 76 dependent on claim 75 should be allowed.

Referring to claim 78, the claim is amended to recite "...a tip adapted to penetrate through a preformed hole in the wall of the irrigation line in the clamp and having a passage from the tip and through the base, the clamp holding the irrigation line in alignment with the passage; the tip comprising a material less rigid than the material of the irrigation line." King '723 does not disclose the recitations of amended claim 78 and thus claim 78 should be allowed.

Claims 31, 34-35, 40 and 43-44 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Lord (U.S. Pat. No. 105,818). This rejection is respectfully traversed.

Claim 31 is amended to recite "...a body including an external thread thereon to engage the internal thread on the saddle tee, and a tip projecting from the body to penetrate the irrigation line and including a thread thereon to engage the wall of the irrigation line...; wherein the body is configured to be turned relative to the saddle tree as the tip is being turned relative to the irrigation line."

Lord teaches a conical auger B that projects from a faucet stem. After the auger B is bored into a can, an elastic washer C is then forced against the can by a nut D and metallic washer E. The washer C, nut D and washer E apparently are capable of resting on and moving with the faucet stem as the auger is being bored into the can. It is neither described nor inherent in Lord to turn the faucet stem relative to the elements C, D and/or E as the auger B is being turned to bore into the can. Accordingly, Lord does not anticipate the recitations of amended claim 31. Applicant submits that claim 31 and claims 32-35 dependent on claim 31 should be allowed.

Claim 40 is amended to recite "...a body including an external thread thereon to engage the internal thread on the saddle tee, and a tip projecting from the body to penetrate the irrigation line and including a thread thereon to engage the wall of the irrigation line and an opening on an unthreaded portion of the tip to allow fluid communication with the exterior of the irrigation line; the body having a diameter wider than a widest diameter of the tip."

Small holes are made between the threads of the auger B of Lord to allow liquid to pass into it. The auger of Lord has no unthreaded portion. Further, the threads of the auger B of Lord are made quite wide near the base of the cone, so that the actual diameter of the hole made by the auger will be equal to the diameter of the base of the cone, less the width of the threads. The faucet stem has a diameter less than that of the wide auger threads, thereby allowing the elements C, D and E to be pressed against the can and against the wide auger threads inside the can. Thus Lord does not anticipate the recitations of amended claim 40. Applicant submits that claim 40 and claims 41-50 dependent on claim 40 should be allowed.

REJECTION UNDER 35 U.S.C. § 103

Claims 32-33 and 41-42 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lord (U.S. Pat. No. 105,818). This rejection is respectfully traversed.

Claim 32 is amended to recite that "...distance between the threads on the tip increases toward the body." Claim 42 is amended to recite that "...the pitch of at least a portion of the threads on the tip is less than the pitch of the threads on the body."

It is admitted in the Office Action that Lord does not disclose threads that change pitch. Threads that change pitch, however, involve more than an obvious matter of design choice. Change in pitch is significant in that it provides novel functionality that is not obvious. Furthermore, depending on how thread pitch is varied, various functionalities can be provided (*see, e.g.*, specification, paragraphs [0061]-[0077]). Claims 32-33 and 41-42 should be allowed.

Claims 40, 45-48 and 50 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over King (U.S. Pat. No. 6,216,723) in view of Lord (U.S. Pat. No. 105,818). This rejection is respectfully traversed.

As discussed above, claim 40 is amended to recite "...a body including an external thread thereon to engage the internal thread on the saddle tee, and a tip projecting from the body to penetrate the irrigation line and including a thread thereon to engage the wall of the irrigation line and an opening on an unthreaded portion of the tip to allow fluid communication with the exterior of the irrigation line; the body having a diameter wider than a widest diameter of the tip." It would not have been obvious to modify the tap of King '723 to include threads as taught by Lord, in that the threads of the auger of Lord leave a slit in the can that must be sealed by the elements D, E and C. Such a slit in a pipe or line would be problematic and would require a change in the principle of operation of the tap of King '723. Claim 40 accordingly should be allowed. Claim 40 and claims 41-50 dependent on claim 40 should be allowed.

Additionally, referring to claim 45 (dependent on claim 40), the claim is amended to recite "...the tap further comprising a shoulder between the tip threads and the external threads, the shoulder having a diameter which increases with distance from the tip threads to stretch an opening in the wall." Neither King '723 nor Lord, alone or in combination, teach or suggest the recitations of amended claim 45.

NEW CLAIMS

Claims 93-94 are new. Claim 93 recites the tap according to claim 31 "... further comprising the saddle tee having: a base including a passageway that includes the internal thread; and a clamp on an end of the base for engaging the irrigation line generally in alignment with the passageway." New claim 94

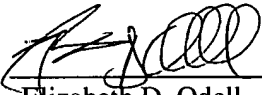
recites the tap according to claim 40 "... further comprising the saddle tee having: a base including a passageway that includes the internal thread; and a clamp on an end of the base for engaging the irrigation line generally in alignment with the passageway." Neither Lord nor King, alone or in combination, teach or suggest the recitations of claims 93-94.

CONCLUSION

It is believed that a full and complete response has been made to the outstanding Restriction Requirement. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (314) 726-7500.

Respectfully submitted,

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